

Analyte	Human Health Screening Standard for Drinking Water Samples ¹	Ecological Screening Standard for Surface Water Samples ²	Human Health Screening Standard for Drinking Water Samples ¹	Ecological Screening Standard for Surface Water Samples ²
Water Quality				
Temperature	-	-		
Dissolved Oxygen	-	<6 mg/L		
Specific Conductance	-	-		
pH	-	6.5 - 9.0		
Turbidity	-	50 NTU		
Dissolved metals				
Aluminum	47,000	µg/L	87	µg/L
Antimony	6	µg/L	5.6	µg/L
Arsenic	5	µg/L	10	µg/L
Barium	2,000	µg/L	220	µg/L
Beryllium	4	µg/L	0.66	µg/L
Boron	9,300	µg/L	360	µg/L
Cadmium	5	µg/L	0.1	µg/L
Calcium	Essential nutrient	-	-	
Chromium	3	µg/L	25	µg/L
Cobalt	14	µg/L	3	µg/L
Copper	1,300	µg/L	3	µg/L
Iron	33,000	µg/L	1,000	µg/L
Lead	15	µg/L	0.59	µg/L
Magnesium	Essential nutrient	-	-	
Manganese	970	µg/L	200	µg/L
Mercury	2	µg/L	0.012	µg/L
Molybdenum	78	µg/L	800	µg/L
Nickel	910	µg/L	17	µg/L
Potassium	Essential nutrient	53,000	µg/L	
Selenium	50	µg/L	5	µg/L
Silica	-	-	-	-
Silver	210	µg/L	0.06	µg/L
Sodium	Essential nutrient	680,000	µg/L	
Strontium	-	-	1,500	µg/L
Thallium	0.5	µg/L	0.24	µg/L
Tin	-	-	73	µg/L
Titanium	-	-	-	-
Vanadium	190	µg/L	27	µg/L
Yttrium	-	-	-	-
Zinc	14,000	µg/L	39	µg/L
Total Suspended Solids				
Total Suspended Solids	-	-	N.A.	-
Total Dissolved Solids				
Total Dissolved Solids	-	-		
Total Metals				

Aluminum	47,000	µg/L	2,000	µg/L				
Antimony	6	µg/L	5.6	µg/L				
Arsenic	5	µg/L	10	µg/L				
Barium	2,000	µg/L	220	µg/L				
Beryllium	4	µg/L	0.66	µg/L				
Boron	9,300	µg/L	360	µg/L	9.3	mg/L	0.36	mg/L
Cadmium	5	µg/L	2	µg/L				
Calcium	Essential nutrient		-	-				
Chromium	3	µg/L	29	µg/L				
Cobalt	14	µg/L	24	µg/L				
Copper	1,300	µg/L	3	µg/L				
Iron	33,000	µg/L	2,300	µg/L				
Lead	15	µg/L	0.6	µg/L				
Magnesium	Essential nutrient		-	-				
Manganese	970	µg/L	200	µg/L				
Mercury	2	µg/L	0.012	µg/L	0.002	mg/L	0.00001	mg/L
Molybdenum	78	µg/L	-	-				
Nickel	910	µg/L	17	µg/L				
Potassium	Essential nutrient		53,000	µg/L				
Selenium	50	µg/L	5	µg/L				
Silica	-	-	-	-				
Silver	210	µg/L	0.06	µg/L				
Sodium	Essential nutrient		680,000	µg/L				
Strontium	-	-	1,500	µg/L				
Thallium	0.5	µg/L	0.24	µg/L				
Tin	-	-	73	µg/L				
Titanium	-	-	-	-				
Vanadium	190	µg/L	27	µg/L				
Yttrium	-	-	-	-				
Zinc	14,000	µg/L	39	µg/L				
Anions								
Bromide	-	-	-	-				
Chloride	250	mg/L	230	mg/L				
Fluoride	-	-	1.8	mg/L				
Nitrate Nitrogen ³	10	mg/L	0.31	mg/L				
Nitrite Nitrogen ⁴	1	mg/L	10	mg/L				
Sulfate	250	mg/L	-	-				
Orthophosphate	-	-	-	-				
Nutrients								
Ammonia Nitrogen	30	mg/L	-	-				
Cyanide	200	ug/L	5.2	ug/L				
Total Kjeldhal Nitrogen	-	-	0.49	mg/L				
Phosphorus	-	-	0.08	mg/L				

Analyte	Human Health Screening Standard for Drinking Water Samples ¹	
Volatile Organic Compounds		
Bromodichloromethane	80	µg/L
Chloroform	80	µg/L
Dibromochloromethane	80	µg/L

Sediment Screening Values

Contaminant	Background*	HH Screening Levels**
	N = 1 (Van Buren) (mg/kg)	Recreator Soil/Sediment (mg/kg)
Aluminum	3200	273000 max
Antimony	0.20 U	110
Arsenic	0.20 U	120
Barium	38	54600
Beryllium	0.30 U	547
Boron	5.0 U	54700
Cadmium ^a	0.10 U	246
Calcium	500	Essential nutrient
Chromium ^b	8.9	104
Cobalt	3.3	82.1
Copper	3.6	11000
Iron	6800	192000 max
Lead	3.1	400
Magnesium	1300	Essential nutrient
Manganese	120	6560
Mercury ^c	0.050 U	27.4
Molybdenum	1.0 U	1370
Nickel ^d	3.3	132
Potassium	870	Essential nutrient
Selenium	0.40 U	1370
Silica		-
Silver	0.50 U	1370
Sodium	100 U	Essential nutrient
Strontium	3.1	123000 Max
Thallium ^e	0.10 U	2.74
Tin	1.5 U	123000 Max
Titanium	N/A	N/A
Vanadium	11	1380
Yttrium	3.8	N/A
Zinc	16	82100

aCadmium from diet

bChromium (VI)

cMethyl Mercury

dNickel Subsulfide

eThallium Chloride

Assumptions: EF=100 days/year

ET=2 hr/event

* Background values based on 1 upgradient sediment sample.

** Values are based on ELCR=10-4 or HI = 1.

Eco Screening Levels	
Ecological (mg/kg)	
3200 (bkg)	
2	
9.8	
60	
-	
-	
0.99	
Essential nutrient	
	43.4
	50
	31.6
6800 (bkg)	
	35.8
Essential nutrient	
	460
	0.18
	-
	22.7
Essential nutrient	
	2
	-
	0.733
Essential nutrient	
3.1 (bkg)	
-	
-	
-	
57	
3.8 (bkg)	
121	

Contaminant	HH Screening Levels**
	Recreator Surface Water ($\mu\text{g/L}$)
Aluminum	484,000
Antimony	116
Arsenic	145
Barium	37,900
Beryllium	55
Boron	96,700
Cadmium ^a	75
Calcium	Essential Nutrient
Chromium ^b	100
Cobalt	156
Copper	19,300
Iron	339,000
Lead	15
Magnesium	Essential Nutrient
Manganese	3060
Mercury ^c	48
Molybdenum	2420
Nickel ^d	93
Potassium	Essential Nutrient
Selenium	2420
Silica	NA
Silver	919
Sodium	Essential Nutrient
Strontium	290,000
Thallium ^e	3
Tin	290,000
Titanium	NA
Vanadium	454
Yttrium	NA
Zinc	152,000
Assumptions: EF=100 days/year	
bChromium (MCL)	ET=2 hr/event
cMethyl Mercury	EV= 1 event/day

dNickel Subsulfide

eThallium Chloride

** Values are based on ELCR=10-4 or HI = 1.

SESD

DRVb
DRVb-0214SD
Sediment
2/8/14 19:10

Analyte	
% Solids	67
Aluminum	3200 J,QM-2
Antimony	0.20 U,J,QM-1
Arsenic	0.20 U
Barium	38
Beryllium	0.30 U
Boron	5.0 U
Cadmium	0.10 U
Calcium	500
Chromium	8.9
Cobalt	3.3
Copper	3.6 J,QR-2
Iron	6800
Lead	3.1
Magnesium	1300 J,QM-2
Manganese	120
Mercury	0.050 U
Molybdenum	1.0 U
Nickel	3.3
Potassium	870
Selenium	0.40 U
Silver	0.50 U
Sodium	100 U
Strontium	3.1
Thallium	0.10 U
Tin	1.5 U
Titanium	270 J,QM-2
Vanadium	11
Yttrium	3.8
Zinc	16

Note: All background surface water samples are total surface water, i.e., unfiltered samples.

Parameter	PQL	Units	AC04608	AC04666	AC04679	AC04728
Bromide		mg/L	-	-	-	-
Chloride		1 mg/L	14	14	9.8	13
Fluoride		0.4 mg/L	0.4 U, J2	0.4 U	0.4 U	0.4
NH3 as N		0.02 mg/L	0.02 U	0.02 U	-	-
NO2 plus N		0.02 mg/L	0.38	0.34	0.35	0.36
P:Total P		0.02 mg/L	0.03	0.05	0.05	0.04
Residue_Si		6.2 mg/L	15	28	18	10
Residue_Ti		12 mg/L	-	-	89	84
Sulfate		2 mg/L	4.4	3.8	4.2	4.2
TKN as N		0.2 mg/L	0.24	0.24	0.26	0.23
Turbidity		1 NTU	-	-	31	26
Aluminum		50 ug/L	770	1100	1300	1100
Antimony		10 ug/L	10 U	10 U	10 U	10
Arsenic		2 ug/L	2 U	2 U	2 U	2
Barium		10 ug/L	29	34	32	30
Beryllium		5 ug/L	5 U	5 U	5 U	5
Boron		50 ug/L	230	200	140	170
Cadmium		0.5 ug/L	0.5 U	0.5 U	0.5 U	0.5
Calcium		0.1 mg/L	8.7	8.5	7.8	7.6
Chromium		10 ug/L	10 U	10 U	10 U	10
Cobalt		50 ug/L	50 U	50 U	50 U	50
Copper		2 ug/L	2 U	3.3	2 U	2
Iron		50 ug/L	1200	1700	1900	1400
Lead		2 ug/L	2 U	2 U	2 U	2
Lithium		25 ug/L	25 U	25 U	25 U	25
Magnesium		0.1 mg/L	3	3	3	2.8
Manganese		10 ug/L	36	41	38	29
Mercury		0.2 ug/L	0.2 U	0.2 U	0.2 U	0.2
Molybdenum		10 ug/L	10 U	10 U	10 U	10
Nickel		2 ug/L	2 U	2.1	2 U	2
Potassium		0.1 mg/L	1.5	1.6	1.8	1.7
Selenium		5 ug/L	5 U	5 U	5 U	5
Silver		1 ug/L	1 U	1 U	1 U	1
Sodium		0.1 mg/L	4.4	4.9	5	4.7
Strontium		10 ug/L	52	52	44	48
Thallium		2 ug/L	2 U	2 U	2 U	2
Tin		10 ug/L	10 U	10 U	10 U	10
Titanium		10 ug/L	39	54	54	54
Vanadium		25 ug/L	25 U	25 U	25 U	25
Yttrium			-	-	-	-
Zinc		10 ug/L	13	13	13	11

	EDEN- VANBURE N-SW- 20140205	EDEN- VANBURE N-SW- 20140206	DRREF- 0214SW	VBB01
U	0.10U	0.10U	-	-
	8.9	9.5	-	-
	-	-	-	-
	0.01U	-	-	-
	0.32	-	-	-
	0.1U	-	-	-
	16.5	11.1	-	-
	58	76	-	-
	5.2	5.3	-	-
	0.1J	-	-	-
U	29	25	-	-
	1290	1310	680	690
	0.1U	1U	1U	1U
	0.1U	1U	1U	1U
	27	24.8	22	24
	0.1U	1U	3U	3U
	133	151	170	-
	0.1U	1U	0.5U	0.5U
	6.83	7.41	6.8	7.8
	1.5	1.6	5U	5U
U	0.1U	1U	5U	5U
	1.1	1.2	10U	1U
	1360	1400	1000	1000
	0.56J	0.64J	0.43	1U
	-	-	-	-
	2.51	2.69	2.4	2.9
	26.9	25.7	23	25
	0.02U	0.02U	0.1U	0.1U
	10U	10U	10U	10U
	0.85J	0.88J	10U	10U
U	1.56	1.42	1.4	1.4
	1U	1U	2U	2U
	0.1U	0.1U	5U	5U
	5.03	4.31	4	4.2
	-	-	44	47
	1U	1U	0.5U	1U
	-	-	15U	15U
	1U	1U	31	28
	2.1	2.9	5U	5U
	-	-	3U	3U
U	3.6J	4.1J	10U	10U